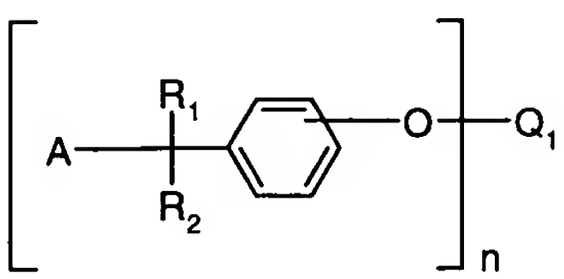
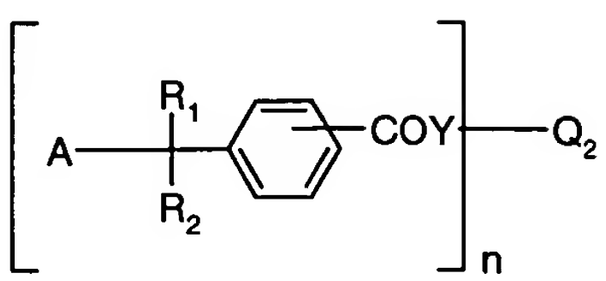
Abstract of the Invention

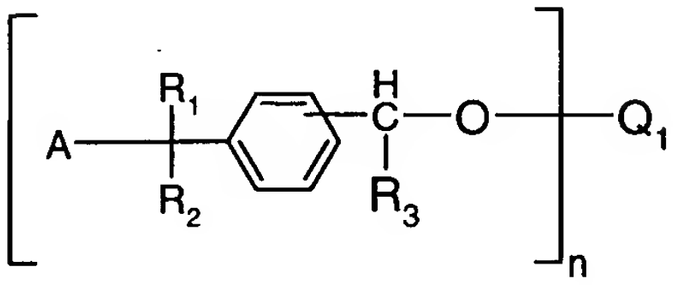
The invention pertains to a compound of formula (I), (II) or (III)



(I)

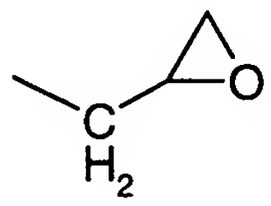


(II)



(III)

wherein R_1 and R_2 are independently of each other hydrogen, C_1-C_{18}alkyl, C_3-C_{18}alkenyl, C_3-C_{18}alkinyl or phenyl which are unsubstituted or substituted by NO_2, halogen, amino, hydroxy, cyano, carboxy, C_1-C_4alkoxy, C_1-C_4alkylthio, C_1-C_4alkylamino or di(C_1-C_4alkyl)amino;
A is a group capable of forming a stable free nitroxyl radical A•, which is bound via its oxygen atom to the carbon atom; Y is O, NR_3 or CHR_3-X_a, wherein X_a is O, S or NR_3;
R_3 is hydrogen, C_1-C_{18}alkyl, C_3-C_{18}alkenyl, C_3-C_{18}alkinyl or phenyl which are unsubstituted or substituted by NO_2, halogen, amino, hydroxy, cyano, carboxy, C_1-C_4alkoxy, C_1-C_4alkylthio, C_1-C_4alkylamino or di(C_1-C_4alkyl)amino; Q_1 is an organic or inorganic radical, derived from a compound having at least one functional group being capable of reacting with a hydroxy group; Q_2 is an organic radical derived from a mono or polyfunctional alcohol, mono or polyfunctional aminoalcohol, mono or polyfunctional amine mono or polyfunctional mercaptane, mono or polyfunctional phenol or mono or polyfunctional thiophenol; and
n is a number from 1 to 20;

with the proviso, that in formula (I) if n is 1, Q_1 is not  , or if n is 2, R_1 is H

and R_2 is -CH_2-O-tert-butyl, A is not 2,2,6,6-tetramethylpiperidine or 2,2,6,6-tetramethylpiperidine-4-carboxylic acid. Further subjects of the invention are a composition comprising above compounds and at least one ethylenically unsaturated monomer, process for polymerization and the (co)polymers obtained therefrom.

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AB

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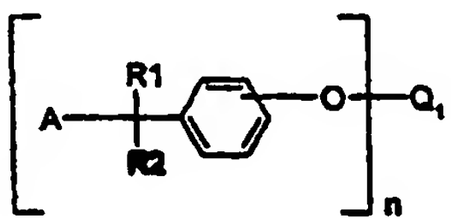
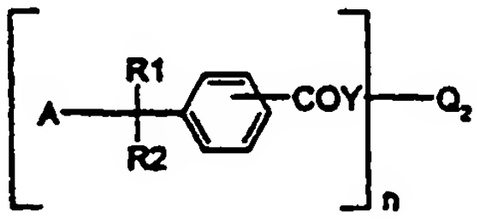
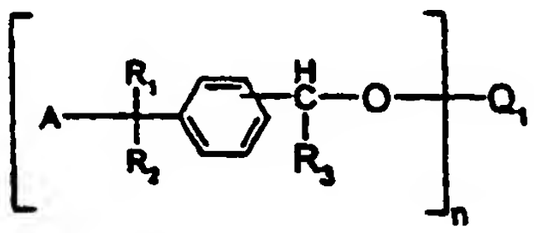
(54) Title: MONO AND MULTIFUNCTIONAL ALKOXYAMINES FOR THE PREPARATION OF FUNCTIONALIZED MACROMERS



(I)



(II)



(III)

(57) Abstract: The invention pertains to a compound of formula (I), (II) or (III) wherein R_1 and R_2 are independently of each other hydrogen, C_1-C_{18}alkyl, C_3-C_{18}alkenyl, C_3-C_{18}alkinyl or phenyl which are unsubstituted or substituted by NO_2, halogen, amino, hydroxy, cyano, carboxy, C_1-C_4alkoxy, C_1-C_4alkylthio, C_1-C_4alkylamino or di(C_1-C_4alkyl)amino; A is a group capable of forming a stable free nitroxyl radical $A_.$, which is bound via its oxygen atom to the carbon atom; Y is O, NR_3 or CHR_3-X_a, wherein X_a is O, S or NR_3; R_3 is hydrogen, C_1-C_{18}alkyl, C_3-C_{18}alkenyl, C_3-C_{18}alkinyl or phenyl which are unsubstituted or substituted by NO_2, halogen, amino, hydroxy, cyano, carboxy, C_1-C_4alkoxy, C_1-C_4alkylthio, C_1-C_4alkylamino or di(C_1-C_4alkyl)amino; Q_1 is an organic or inorganic radical, derived from a compound having at least one functional group being capable of reacting with a hydroxy group; Q_2 is an organic radical derived from a mono or polyfunctional alcohol, mono or polyfunctional aminoalcohol, mono or polyfunctional amine mono or polyfunctional mercaptane, mono or polyfunctional phenol or mono or polyfunctional thiophenol; and n is a number from 1 to 20; with the provison that in formula (I) if n is 1, Q_1 is not (a), or if n is 2, R_1 is H, and R_2 is -CH_2-O-tert.butyl, A is not 2,2,6,6-tetramethylpiperidine or 2,2,6,6-tetramethylpiperidine-4-carboxylic acid. Further subjects of the invention are a composition comprising above compounds and at least one ethylenically unsaturated monomer, process for polymerization and the (c)polymers obtained therefrom.

WO 01/02345 A2